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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,174	04/19/2001	Yoshiki Yasuda	1247-0441P	8418
2292	7590	10/21/2003	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			SOHN, SEUNG C	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 10/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/837,174

Applicant(s)

YASUDA, YOSHIKI

Examiner

Seung C. Sohn

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "the light receiving face is opposed to light emitting faces of the light emitting elements" in **claims 1-12** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. ***Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph***, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1-12 recite the limitation "the light receiving face" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1-3, 11 and 12 are rejected under 35 U.S.C. 102(a) as being anticipated by Matsuo et al. (Patent No. JP02000223738A).

Referring to claims 1 and 12, Matsuo et al. shows in Figs. 1-2 & 8 the following elements of Applicant's claim:

a) an input section having a plurality of light emitting elements (11s, 16s) and lead terminals (15) for supplying a drive current to the light emitting elements (Paragraph 0016); and

b) an output section having a light receiving element (12), wherein the light receiving face is opposed to light emitting faces of the light emitting elements (Fig. 8) and lead terminals (17) for supplying a drive current to the light receiving element (Paragraph 0018 and Abstract), wherein the light receiving element (12s) receives light emitted from the plurality of the light emitting elements (11s), and wherein the plurality of light emitting elements (11s, 16s) are connected in series (Paragraph 0016).

Referring to claim 2, Matsuo et al. shows in Fig. 13 that the plurality of light emitting elements (11, 16) are connected in series via a plurality of headers (13, 15).

Referring to claim 3, Matsuo et al. shows in Fig. 1 that a header (13a) is provided with two light emitting elements (11) (Paragraph 0014).

Referring to claim 11, Matsuo et al. shows in Fig. 1 or Fig. 8 that the path (19a) of light emitted from the light emitting element (11 or 16) to the light receiving element (12) is a straight line (Paragraph 0019 or Paragraph 0035).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. ***Claims 1, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekiguchi (Patent No. JP 402168678A) in view of Applicant's Prior Art (APA).***

Referring to claims 1 and 12, Sekiguchi shows in Fig. 1 the following elements of Applicant's claim:

a) an input section having a plurality of light emitting elements (1A-1C) and lead terminals (TI1, TI2) for supplying a drive current to the light emitting elements (see Abstract); and

b) an output section having a light receiving element (2) and lead terminals (TO1, TO2) for supplying a drive current to the light receiving element, wherein the plurality of light emitting elements are connected in series (see Abstract).

Sekiguchi shows as above, but is silent that the light receiving face is opposed to light emitting faces of the light emitting elements. APA shows in Fig. 10 that the light receiving face is opposed to light emitting faces of the light emitting elements. It would have been obvious to one of ordinary skill in the art to provide the physical configuration of APA in the device of Sekiguchi for the purpose of increasing light detection of photodetector (2).

Referring to claim 11, Sekiguchi shows in Fig. 1 that the path of light emitted from the light emitting element (1A-1C) to the light receiving element (2) is a straight line.

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuo et al. (Patent No. JP02000223738A).

Referring to claim 4, Matsuo et al. shows as above, but is silent that structures of the two light emitting elements are different from each other. Using two different structures of light emitting elements is widely known. Therefore, it would have been obvious to one of ordinary skill in the art to provide different light emitting elements for the purpose of design requirement.

9. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuo et al. (Patent No. JP02000223738A) in view of Tani et al. (Patent No. US 6,080,602).

Referring to claim 5, Matsuo et al. shows as above, but is silent that at least one of plurality headers is a dummy header. Tani et al. shows in Fig. 1B a dummy header (2). It would have been obvious to one of ordinary skill in the art to provide a dummy header of Tani et al. in the device of Matsuo et al. for the purpose of connecting light emitting elements and terminals by wires.

Referring to claim 6, Matsuo et al. shows as above, but is silent that the dummy header is lead-cut from a lead frame inside a package which covers and protects the semiconductor chip. Tani et al. shows in Fig. 1B that the dummy header (2) is lead-cut from a lead frame (3) inside a package (10, 11) which covers and protects the semiconductor chip (Col. 1, lines 42-51). It would have been obvious to one of ordinary skill in the art to provide a header lead-cut from a lead frame inside a package of Tani et al. in the device of Matsuo et al. for the purpose of separating into individual devices.

Referring to claim 7, Matsuo et al. shows as above, but is silent that the dummy header is lead-cut from a lead frame outside a package which covers and protects the semiconductor chip. Tani et al. shows in Fig. 3 that the dummy header (39) is lead-cut from a lead frame (34) outside a package (52) which covers and protects the semiconductor chip (Col. 4, lines 46-67). It would have been obvious to one of ordinary skill in the art to provide a header lead-cut from a lead frame outside a package of Tani et al. in the device of Matsuo et al. for the purpose of protecting the semiconductor chip.

10. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuo et al. (Patent No. JP02000223738A) in view of APA.

Referring to claim 8, Matsuo et al. discloses as above, but is silent the step of tie-bar cutting and lead cutting the dummy header at the same time. APA discloses the step of burr removal and tie-bar cutting are done at the same time (Page 6, lines 23-24). It would have been obvious to one of ordinary skill in the art to provide the step of tie-bar cutting and lead cutting the dummy header at the same time for the purpose of decreasing the number of manufacturing steps.

Referring to claim 9, Matsuo et al. discloses as above, but is silent that a lead-cut portion of the dummy header is disposed in the vicinity of a tie-bar cut portion. To locate lead-cut portion of the dummy header in the vicinity of a tie-bar cut portion is a design choice. Therefore, it would have been obvious to one of ordinary skill in the art to provide a lead-cut portion of the dummy header disposed in the vicinity of a tie-bar cut portion for the purpose of cutting those portions simultaneously.

Referring to claim 10, Matsuo et al. discloses as above, but is silent that a lead frame is used in which the dummy header is connected to a header of another channel adjacent to the dummy header via a connecting member. It is widely known that a frame is used to connect two headers. Therefore, it would have been obvious to one of ordinary skill in the art to provide a lead frame used in which the dummy header is connected to a header of another channel adjacent to the dummy header via a connecting member for the purpose of mass production.

Response to Arguments

11. Applicant's arguments filed on July 22, 2003 have been fully considered but they are not persuasive. Matsuo et al. clearly shows in Fig. 8 that the light receiving face (12) is opposed to light emitting face of light emitting elements (11s, Fig. 6). Also, Matsuo et al. shows in Fig. 6 that a light receiving element (12s) receives light emitted from the plurality of light emitting element (11s). Even though each one of light receiving element (12) receives light emitted from the corresponding light emitting element (11), a light receiving element (12s) clearly receives light emitted from the plurality of light emitting element (11s).

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seung C. Sohn whose telephone number is (703) 308-4093. The examiner can normally be reached on Monday through Friday from 8:30 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (703) 308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

SCS

SCS
October 17, 2003


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